#### **EDUCATION**

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course and communications. Week 4 commencing Mon-

day 12 November (1989 delegates will have the first option). Course content includes: Personal awareness, report writing, public speaking, team building, stress, committee presentation and customer care

The cost of weeks 1, 2, 3 or 4 will be £173.75 plus VAT. Total £200.00. Accommodation, four nights, all meals etc will be on a twin-bedded basis within the Aldwark Manor Hotel, York. Please make all cheques payable to BIGGA.

MASTER **GREENKEEPER** CERTIFICATE UPDATE

> EVERAL members are fast approaching the magical 200 credits which will then allow them onto Stages 2 and 3 of the Certificate

The MGC Working Party have taken into consideration all the constructive comments from members since the introduction of the Scheme and more and more members are now joining

Golf Clubs are registering the full Greenkeeping Staff onto the Scheme and at the same time requesting directions for the staff's education. Are you

registered yet? Several of the Greenkeepers Training Committee Colleges are looking at Schemes for accrediting Greenkeepers for their previous learning. This will be a major breakthrough for all greenkeepers who have not received certificates for all their experience and knowledge attained over the years. Credits will also be issued for Section, Regional and National

Seminars The College Courses all carry high credits for their City and Guilds and Scotvec courses. NB Extra Credits are given for attending courses at GTC Approved Colleges. Stages 2 and 3 are here in detail and also a Credits Report example on the many ways of achieving Stage 1. If anyone has any questions about the MGC please ring me at Headquarters. Remember the Master Greenkeeper Certificate is the most prestigious award in our profession based on both experience and education

> DAVID GOLDING **Education Officer**

**MASTER GREENKEEPER** CERTIFICATE

Details of Stage Two HERE are nine subsections, all of which must be passed. Sections will be marked from one to five and if a question is marked less than three, questions will be asked. If a satisfactory answer is given, then a further one or two marks may be awarded. Section 1. Presentation of

the Course

Areas of assessment: i greens, ii. tees, iii. fairways, iv semi-rough, v. rough, vi. bunkers, vii. surrounds, viii. pathways, ix. furniture. hazards, xi. clubhouse area, xii drainage, xiii. trees and xiv. boundary fences, hedges etc. Presentation involves accuracy and tidiness of maintenance. siting, condition and playability of area.

Section 2. Staff Organisation. In staff organisation, the assessors will be looking for general attitude to work from the point of view of the golfer, dress, welfare, accommodation and training programmes on and off site. This will require questions in the following areas: i. welfare, ii. training on site, iii. training - off site, iv. attitude and v. safety.

Section 3. Organisation of

Assessors will be looking for general tidiness (not daily dirt), compliance with appropriate safety regulations regarding storage of tools and equipment, also the current state of repairs of buildings. Questions will be asked in the following areas: i. tidiness, ii. legislation and iii. shed condition.

Section 4. Budget Management.

The wide range of variation and responsibility should be recognised in this section but the least expected should be that the budget prepared by the Greenkeeper should be the basis for management discussion. The important elements are therefore responsibility for the budget within members (Committee) limits. NB Lack of direct involvement with setting or servicing a budget by whatever means will be regarded as a disqualification. Questions will be asked on the following: i. Preparation of a budget, ii. Control of a budget and iii. Purchasing procedures.

Section 5. Record and Stock

Assessors will expect to find that all records required as a result of legislation are completed to their satisfaction. Also other records are necessary to achieve an adequate level of



BIGGA Education Officer David

management. Accessibility of records to other staff will be taken into account where appropriate and therefore questions will be asked on the following: i. Diary, ii. Machine Maintenance, iii. Stock Inventory and iv. Chemical Log. Section 6. Management

Participation.

In this area a Master Greenkeeper should play a major role in the decision making process of the club with regards to the golf course. It is essential that the relationship to the management, the role within the Committee and the ability/opportunity to submit reports and support them will be considered. Questions regarding the exact areas will be asked: i. Attendance at management meetings, ii. Role at management meetings, iii. Report submission, iv. Relationship with management.

Section 7. Course Develop-

ment Programme.

Assessors will be looking for the candidate to recognise potential problems and have drawn up a programme to correct or rectify specific problems. This may involve a long term maintenance or construction programme. Assessors will be looking for the relationship between the greenkeeper and the club in the methods used in drawing up the programme.

NB. It will be assumed that bodies providing relevant assistance would be brought in as required. Questions will be asked on the following: i. Construction programme implemented, ii. Development programme in situ, iii. Sources used for development and iv. Conservation.

Section 8. Machine and

Irrigation.

Assessors will be looking for a planned replacement and maintenance programme. The greenkeeper's influence, also at the operative condition of equipment, which will also be coupled with questions directed to what the assessors find: i. Programme, ii. Condition, iii. Irrigation operative and iv. Irrigation Maintenance.

Section 9. Golf.

An ability to play golf or at least a detailed knowledge of the requirements of a golfer of varying standards. i. Golfing knowledge. All sections must be passed to complete Stage 2. The applicant will be notified of the result within two months and if unsuccessful can appeal to the BIGGA Education Sub-Committee within one month.

#### **MASTER GREENKEEPER** STAGE 3 MODULE EXAMINATION **SYLLABUS**

All syllabus items should be prefixed by the words: "The Master Greenkeeper is expected to be able to'

1 Plants and Growth, Trees and Shrubs

Grasses and Turf: Recognise and evaluate the more common grass species. 1.2 Interpret reliable sources of technical information on species and cultivars. Relate plant structure and the following physiological processes involved in plant growth to the turf grass management: 1. Photosynthesis; b. Respiration; c. Water uptake and transpiration and d. Nutrient uptake and distribution.

1.4 Recognise the effects of plant growth and the relationship to turf management of the following: a. Light levels; b. Day length; c. Temperature; d. Water levels; e. Maintenance

operations and f. Wear.

1.5 Explain the effects of maintenance procedures, wear and tear, soil type and condition on botanical composition of turf. 1.6 Explain the methods involved in restoring and improving botanical com-position of turf. 1.7 Explain the consequences of changing maintenance operations on the survival and development of grasses. 1.8 Recognise changes in general turf appearances, composition and range of plants. 1.9 Recognise environmental factors influencing range of plants found on parkland, heathland, moorland and links courses. 2.0 Explain how grasses are selected, bred and bulked up for sales by plant breeders.

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Trees and Shrubs

2.1 Evaluate the use of trees and shrubs on golf courses. 2.2 Explain that selected trees and shrubs must be suitable for the purpose, soil type and environment. 2.3 Explain the importance of good positioning, planting and maintenance on trees, shrubs and hedges. 2.4 Recognise problems and maintenance of mature trees. 2.5 Ornamental Plants: i. Evaluate the uses of ornamental plants for - a. Clubhouse surrounds; ii. Explain the establishment and maintenance of - a. Seasonal bedding; b. Herbaceous borders; c. Outdoor pot planters and troughs

# Soils and Water, Fertilizers, Pest, Disease and Weed Control Soils and Water

1.1 Appreciate how soils are formed by weathering from parent materials. 1.2 Interpret and use the information contained in a soil map. 1.3 Appreciate the effect on surface vegetation, drainage capacity and plant growth of various types of soil profile. 1.4 Recognise the meaning of 'soil structure' and 'soil texture' and explain their effects on fertility. drainage and nutrient reten-tion. 1.5 Describe the effects of cultivation on structure. 1.6 Predict whether soils are subject to puddling, poaching, capping or erosion. 1.7 Explain the importance of soil air with regard to bulk density, pore space and compaction. 1.8 Explain humification. Define 'soil organic matter' and explain the role it plays in nutrient status, pH, water retention, cation exchange capaciand thatching. 1.10 Recognise the principles of land drainage and modern drainage methods. 1.11 Explain the common terms relating to soil water: 1. gravitational water; b. capillary water; c. hygroscopic water; d. field capacity; e. Permanent wilting point; f. soil moisture deficit and its calculation; g. High water table; h. Perched water table; i. impermiable subsoils; j. Available water capacity and its calculation.

1.12 Recognise physical and botanical indicators of impected drainage. 1.13 Explain the importance of Carbon and Nitrogen cycles and their relationship to soil fertility. 1.14 Explain the effects of pH level on nutrient status and availability, grass species and plant stress. 1.15 Explain the importance of soil mechanical analysis and chemical analysis with regard to construction and maintenance procedures. 1.16 Explain cation exchange and buffering capacity.

#### **Fertilisers**

2.1 Understand the need for turf nutrition and prepare a balanced programme to satisfy the need. 2.2 Demonstrate ability to compare different fertilisers and appreciate short and long term affects of regular use of different types. i. Explain what is meant by terms 'Major element' and Minor of Micro elements. ii. Explain the effects of deficiencies and excesses of fertiliser usage. iii. Explain the terms related to everyday fertiliser use: a inorganic; b. organic; c. compounds and straights; d. slow release; e. liquid applications; f. prilled; g. base dressing; h. top dressing. 2.3 Describe various methods and rates of fertiliser application. 2.4 Relate the effect of fertilisers on soil pH. 2.5 Describe the fertiliser requirements for specific swards in different situations (sand, USGA, links, heath, parkland). 2.6 Utilise a sound understanding of fertilisers to produce a balanced programme for fine turf. 2.7 Explain how plant food ratios are an important part of any fertiliser programme.

Pest, Disease and Weed Control

3.1 Recognise the symptoms of the more common diseases of turf. Recognise the environmental factors which lead to development of turf diseases and explain the cultural control methods. 3.2 Appreciate chemical methods of controlling turf diseases and the consequences of using the chemicals on the turf grass environment. 3.4 Recognise a wide range of weeds in turf. 3.5 Recognise indicator weeds for soil type, pH level, wear level and poor drainage. 3.6 Explain the cultural, chemical and biological controls used on weeds. 3.7 Explain the relationbetween maintenance, heavy wear and weed infestation. 3.8 Identify the pests commonly found in new and/or established turf and the damage caused. 3.9 Explain the cultural, chemical and biological controls used on pests of turf. 3.10 Explain the term 'Chemical Formulations' and mode of action using examples. Recognise the importance of formulation and the mode of action of pesticides. 3.11 Recognise the role for wetting agents and growth regulations.

### 3 – Machinery; Health, Safety and Welfare

1.1 Evaluate machinery for golf course: i. Evaluate powered and trailed golf course equipment with regard to: a. Engine type and size; b. Fuel type; c. Performance; d. Servicing and maintenance. 1.2 Describe the requirements for safe, suitable storage of: a. Tools. b. Machines. c. Spares. Health, Safety and Welfare

2.1 Explain the various requirements of: a. Health and Safety at Work Act; b. Food and Environment Protection Act (FEPA); c. Control of Substances Hazardous to Health (COSHH); d. Storage of

Fuel etc; e. Use of vehicles on Highways; relative to golf course management.

4 - Construction

1.1 Appreciate golf course design relating to positioning, shape and size of greens, tees, bunkers, fairways and water with regard to: a. Requirement of the game; b. Existing landscape; c. Future maintenance. 1.2 Appreciate up to date methods of constructing greens, tees, fairways and bunkers. 1.3 Appreciate the advantages and limitations of different techniques of construction with regard to future maintenance and existing features. 1.4 Prepare specifications and Bills of Quantities for constructing features. 1.5 Understand the method of ascertaining suitability of materials used in construction. 1.6 Understand the principles of basic surveying. 1.7 Appreciate the additional work involved in the preparation before and restoration after a major golf tournament.

> 5 - Management The Golf Industry

1.1 Understand the structure of the golf industry including: a. History of game; b. Number of golf courses in the UK; c. The distribution of these golf courses; d. The number of players; e. Employment numbers; f. Present trends eg Set-aside scheme.

Finance

2.1 a. List the sources of funds available for the development of golfing facilities and describe the advantages and disadvantages of each. b. Prepare budgets for construction and maintenance work. c. Describe how to present such budgets to committee. d. Explain how to monitor/control a budget once monies have been allocated by committee. e. Explain the terms used when budgeting for replacement

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#### WE OFFER

- ★ BTEC National Diploma in Turf Science and Sports Ground Management.
- ★ National Certificate in Groundsmanship and Greenkeeping.
- ★ City & Guilds of London Qualifications.
- ★ Opportunities to work on Golf Courses in Florida.
- ★ The use of £200,000+ worth of turf machinery.
- \* Residential Accommodation.
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- \* BIGGA Approved College.

Contact: Liz James or John Hacker
LANCASHIRE COLLEGE OF AGRICULTURE AND HORTICULTURE
Myerscough Hall, Bilsborrow, Preston, Lancs, PR3 0RY. Tel: 0995 40611



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machinery eg. Leasing, hire purchase, depreciation systems. f. Describe how to complete on analytical cash book and deal with petty cash. g. Explain stock control of materials and equipment.

Interpret Research Data. 3.1 Explain the benefits of golf courses to the localities in which they are situated: i. Acting as reserves for wildlife and plants. ii. Improving the attractiveness of an area to developers and industrialists who are relocating. 3.2 Explain the role of golf course staff in relation to the "corporate image" of the golf club from above. 3.3 Explain the roles of the main national bodies in relation to golf courses, including the R & A, PGA, Golf

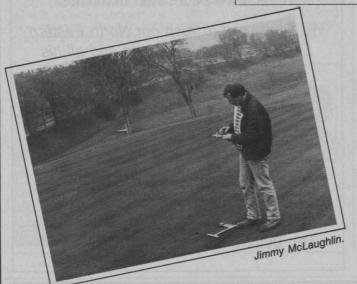
Unions and Golf Development Council, STRI, BIGGA, Sports Council, NCC.

Organisation, Management and Supervision

4.1 a. Understand the management structures of private and municipal golf clubs. b. Explain the importance of the relationships between a club's staff and its various management committees. c. Explain the role of a

Manager. d. Explain the main points of Employment Law as they affect a Manager/Supervisor: e.g. i. Health and Safety at Work including the FEPA and COSHH regulations. ii. Employees' rights including time off work, written statement of particulars of employment, minimum standards of working conditions, itemised pay statements, disciplinary and grievance procedures.

## ON THE COURSE





## JIMMY McLAUGHLIN – MERCHANTS OF EDINBURGH GOLF CLUB

• Jimmy McLaughlin began his greenkeeping career in 1969 as a 15-year-old apprentice at Kingsknowe G.C. in Edinburgh. Once qualified he moved to Dalmahoy Golf and Country Club on the edge of the city. After five years at Dalmahoy, he became head greenkeeper at "The Merchants", an 18-hole course set in the heart of one of Edinburgh's most popular residential areas.

The course measures 4889 yards and has a membership list of 700. Jimmy's greenkeeping staff consists of a first assistant, a tractor driver and a trainee.

HERE are times during the winter when I feel more like the course manager for Ski Sunday than head greenkeeper of the Merchants," says Jimmy.

The comment, made in good humour, reflected one of the demands attached to maintaining a city golf course which threads its way around Craiglockhart Hill and has a pleasing combination of hills and valleys.

When the snow begins to fall in Edinburgh, for example, many small boys in the Craiglockhart area grab their sledges and head for the Merchants' inviting slopes.

"Sledging on the course during heavy snow is such a long-held tradition that there is nothing we can do to stop it," said Jimmy. "We have on occasions cleared children away from the course but all you get is a completely different set of sledgers arriving a few minutes later.

"We actually don't mind too much when the course is heavily frozen but the sledges can cause some damage when the snow and ice begins to melt."

the snow and ice begins to melt."
Particularly galling for Jimmy and his team is the fact that some of the most popular sledge runs plot a path across the first and ninth fairways, straight over the eighth green, through a gap in the wall and across the 18th fairway.

"Once the snow clears we simply have to go out and tread down any ruts which have been left," he said. "It's a fact of life for this course and most of the time the damage isn't too bad."

Being set in a residential area with a major road running through the course, the Merchants is seen by many local residents as a valuable part of the land-scape. Jimmy also views the course as an attractive area of land in addition to its more obvious sporting role.

"When we reach Friday each week I

"When we reach Friday each week I like to look back at the course and see that we've put it into top class condition for the members," he said. "Equally, it is satisfying to see that the course adds to the local environment."

The Merchants is a beautifully wooded course, an attribute which has been maintained despite the all too common impact of Dutch Elm Disease during the past few years.

'We lost quite a lot of trees to the

disease and had to embark on a replanting programme five years ago," said Jimmy. "We're currently putting in oak, ash and birch and are making good progress."

The conservationist theme has been added to in recent years with the designation of one part of the course as a Site of Special Scientific Interest (SSSI), a development which Jimmy welcomes.

"The SSSI applies to a craggy part of the course which could never be played over and which is therefore left well alone," he said. "It was found, however, that because the area hadn't been touched by either ploughs or herbicides it contained a number of flower and fauna species which weren't present anywhere else in the whole of Edinburgh."

Jimmy's obvious enjoyment of his job and his "workplace" is perhaps explained by an experience which laid him low for the best part of nine months, some eight years ago.

"It was found that I had a cancer, thankfully one of the more treatable varieties," he said. "Because of the lengthy period of therapy involved, I lost nine months of my life to the disease although in return I think I gained a greater appreciation of plant and wildlife.

"There's nothing better than to be at the Merchants early on a spring morning to enjoy the full beauty of the course and its surroundings."

 This feature is produced by Colin Ley on behalf of the INTURF Group of Companies.